

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A method for desulfurizing kerosene or gas oil, ~~comprising~~ consisting essentially of:

reacting sulfur compounds in a kerosene or gas oil containing aromatic hydrocarbons and at least one sulfur compound selected from the group consisting of thiophene compounds, benzothiophene compounds, and dibenzothiophene compounds among themselves and/or with aromatic hydrocarbons by ~~bringing~~ contacting the kerosene or gas oil ~~into contact~~ with:

a solid superacid catalyst selected from the group consisting of sulfated zirconia, sulfated alumina, sulfated tin oxide, sulfated iron oxide, tungstated zirconia, and tungstated tin oxide, and

optionally a zeolite selected from the group consisting of proton-type faujasite zeolite, proton-type mordenite and proton-type β -zeolite, and having the silica/alumina ratio of 100 mol/mol or less and the content of cations other than proton of 5 mass % or less,

~~wherein desulfurization occurs by the sulfur compounds reacting among themselves and/or with aromatic hydrocarbons~~

~~followed by adsorption desulfurization by bringing the sulfur compounds into contact with the superacid catalyst for the adsorption desulfurization after the reaction among sulfur compounds themselves or the reaction of sulfur compounds with the aromatic hydrocarbons~~ upon contacting the kerosene or gas oil with the solid superacid catalyst, the reaction between the sulfur compounds themselves or between the sulfur compounds and the aromatic hydrocarbons occurs prior to adsorption of the reaction products by the solid superacid catalyst.

2. (currently amended) ~~The method according to claim 1, wherein the kerosene or gas oil is brought into contact with~~

A method for desulfurizing kerosene or gas oil, comprising:

reacting sulfur compounds in a kerosene or gas oil containing aromatic hydrocarbons and at least one sulfur compound selected from the group consisting of thiophene compounds, benzothiophene compounds, and dibenzothiophene compounds among themselves and/or with aromatic hydrocarbons by contacting the kerosene or gas oil into contact with:

a solid superacid catalyst selected from the group consisting of sulfated zirconia, sulfated alumina, sulfated tin oxide, sulfated iron oxide, tungstated zirconia, and tungstated tin oxide, and

a zeolite selected from the group consisting of proton-type faujasite zeolite, proton-type mordenite and proton-type β -zeolite, and having the silica/alumina ratio of 100 mol/mol or less and the content of cations other than proton of 5 mass % or less, ~~and the solid superacid catalyst~~

wherein upon contacting the kerosene or gas oil with the solid superacid catalyst, the reaction between the sulfur compounds themselves or between the sulfur compounds and the aromatic hydrocarbons occurs prior to adsorption of the reaction products by the solid superacid catalyst.

3. (currently amended) The method according to claim 2, wherein the sulfur compounds in the kerosene or gas oil and heavy sulfur compounds produced by the reaction among the sulfur compounds contained in the kerosene or gas oil and/or by the reaction of the sulfur compounds with aromatic hydrocarbons are adsorbed by the zeolite ~~and/or~~ and the solid superacid catalyst.

4. (currently amended) The method according to claim 1, wherein the kerosene or gas oil is desulfurized to a content of the total sulfur compounds ~~(as sulfur)~~ as sulfur of 1 ppm or less.

5-8. (cancelled).

9. (previously presented) The method according to claim 1, wherein the solid superacid catalyst has a specific surface area of 100 m²/g or more.

10. (cancelled).

11. (previously presented) The method according to claim 1, wherein the kerosene or gas oil contains aromatic hydrocarbons as major components.

12. (original) The method according to claim 11, wherein the aromatic hydrocarbon is at least one hydrocarbon selected from the group consisting of benzene, alkylbenzene having 7-14 carbon atoms, naphthalene, and alkylnaphthalene having 11 - 18 carbon atoms.

13. (cancelled).

14. (previously presented) The method according to claim 1, wherein the kerosene or gas oil is desulfurized in a fuel cell vehicle in which kerosene or gas oil is used as an on-board reforming fuel.

15-17. (cancelled).

18. (currently amended) The method according to claim 2, wherein the kerosene or gas oil is desulfurized to a content of the total sulfur compounds ~~(as sulfur)~~ as sulfur of 1 ppm or less.

19. (currently amended) The method according to claim 3, wherein the kerosene or gas oil is desulfurized to a content of the total sulfur compounds ~~(as sulfur)~~ as sulfur of 1 ppm or less.

20. (cancelled).

21. (cancelled).

22. (new) The method according to claim 1, wherein the sulfur compounds in the kerosene or gas oil and heavy sulfur compounds produced by the reaction among the sulfur compounds contained in the kerosene or gas oil and/or by the reaction of the sulfur compounds with aromatic hydrocarbons are adsorbed by the zeolite and the solid superacid catalyst.

23. (new) The method according to claim 2, wherein the kerosene or gas oil is desulfurized to a content of the total sulfur compounds as sulfur of 1 ppm or less.

24. (new) The method according to claim 2, wherein the solid superacid catalyst has a specific surface area of 100 m²/g or more.

25. (new) The method according to claim 2, wherein the kerosene or gas oil contains aromatic hydrocarbons as major components.

26. (new) The method according to claim 25, wherein the aromatic hydrocarbon is at least one hydrocarbon selected from the group consisting of benzene, alkylbenzene having 7-14 carbon atoms, naphthalene, and alkylnaphthalene having 11 - 18 carbon atoms.

27. (new) The method according to claim 2, wherein the kerosene or gas oil is desulfurized in a fuel cell vehicle in which kerosene or gas oil is used as an on-board reforming fuel.

28. (new) The method according to claim 1, wherein the kerosene or gas oil is desulfurized to a content of the total sulfur compounds as sulfur of 1 ppm or less.

29. (new) The method according to claim 22, wherein the kerosene or gas oil is desulfurized to a content of the total sulfur compounds as sulfur of 1 ppm or less.